APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,197	11/27/2000	Shawn Gettemy	PALM-3541.US.P	7885

7590   03/19/2003

WAGNER, MURABITO & HAO LLP
Third Floor
Two North Market Street
San Jose, CA 95113

EXAMINER
LUEDKE, SCOTT L

ART UNIT	PAPER NUMBER
2697	

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/724,197	Applicant(s) GETTEMY ET AL.
	Examiner Scott L Luedke	Art Unit 2697

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-23_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-23_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(a) that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2.   Claims 1-5 and 9-23 are rejected under 35 U.S.C. 102(e) as being unpatentable over

Sawada, et. al., U.S. Patent # 6,476,821 (hereinafter, denoted as "*Sawada*").

Specifically with respect to Claim 1, *Sawada* discloses a display unit (an information

processing apparatus 100 and an image displaying apparatus 110 of Figs. 1 and 2) comprising:

a display panel (image displaying apparatus 110) comprising a pixel matrix comprising:

an (m x n) pixel frame buffer region; (Item 114 in Fig. 1 and see Fig. 9 wherein it discloses the

use of an "X by Y" pixel frame buffer region);

an x pixel border region, wherein said border region surrounds said frame buffer region;

Even though the *Sawada* reference does not graphically show the pixel region "X by Y" as

having a "border region" as recited in this Claim, it is readily apparent and is an inherent

property of any digital entity/image/graphic on any display to have a border. Accordingly, when

using a pixel frame buffer region for displaying an image/graphic/entity as recited herein, it must

also include a surrounding "border region" for it to exist, physically and/or virtually);

a frame buffer memory (display memory unit 106) for containing image data for

generating an image within said frame buffer region; (the display memory unit stores data

relating to the image(s) processed, see Col. 6, Lines 47-49);

a border attribute register (image displaying apparatus information, 112) for containing a

display attribute (area-attribute information, 250) for said border region; (as stated at Col. 11,

Lines 58-64, it should be noted that the internal registers themselves are not shown in the figure,

however, the image displaying device driver (Fig. 2, Item 240) is a program which implements

a draw instruction issued by the operating system (Item 210) by reading out and writing

information from and into internal registers of the display controller (Item 105) and the display

memory unit (Item 106));

a display controller (105) coupled to said frame buffer memory (106), coupled to receive

said display attribute (250) from said border attribute register (storage device 104); see Col. 6.,

Lines 38-49;

and coupled to control said display panel (image displaying apparatus 110), said display

controller (100) for generating a first set of signals for rendering said image within said frame

buffer region (106); (More specifically at Col. 8, Lines 1-6 and 34-36, the application program

(200) generates area-attribute information regarding a specific area on the display screen (e.g.,

border and/or boundaries of an image) of the image displaying apparatus (110) and the image

displaying device driver 240 stores this data until displayed in the display memory unit (106));

and for generating a second set of signals for displaying said display attribute (250)

within said border region. (At Col. 8, Lines 1-6 and 45-47, the area-attribute-information

generating means (201) is described to pass area-attribute information regarding a specific area

on the display screen (e.g., border and/or boundaries of an image) of the image displaying

apparatus (110) and the USB controller (107) to carry out the transmission of the area-attribute

information).

Regarding Claim 2, *Sawada* (Figure 9) discloses a display unit wherein said second set of signals are generated within invalid timing windows with respect to said frame buffer region. (At Col. 15, Lines 12-17, *Sawada* states that in an image signal output (e.g., second set of signals) by the information processing apparatus, an image display is started at a point lagging the trailing edges (e.g., invalid timing windows) of a horizontal synchronization-signal pulse and a vertical synchronization-signal pulse by predetermined periods of time, commonly known in the art as back-porch periods).

In Claim 3, *Sawada* discloses a display unit wherein a first portion of said second set of signals are generated in an invalid horizontal timing window that commences x clock cycles (e.g., x scanning periods) before valid data for said frame buffer region commences and wherein a second portion of said second set of signals are generated in an invalid horizontal timing window that ends x clock cycles after valid data for said frame buffer region completes. (At Col. 15, Lines 60-65, *Sawada* states that the width of the window corresponding to (e.g., a first) of an image signal output can be expressed by a range from a start position corresponding to one horizontal scanning period (e.g., an "x clock cycle"), with the trailing period of the horizontal synchronization-signal pulse taken as a reference (e.g., referencing the frame buffer region)).

As discussed above under the rejection rationales for Claim 3, the limitations as recited for Claim 4 is also disclosed in *Sawada*, wherein it discloses a display unit wherein a third portion of said second set of signals are generated in an invalid vertical timing window that commences x horizontal pulses before a first valid horizontal line commences of a frame and wherein a fourth portion of said second set of signals are generated in an invalid vertical timing window that ends x horizontal pulses after the end of the last valid horizontal line of said frame.

(As stated infra. Regarding Claim 3, at Col. 15, Lines 60-65, *Sawada* states that the width of the window corresponding to (e.g., a fourth) portion of an image signal output can be expressed by a range from a start position corresponding to one horizontal scanning period (e.g., an "x clock cycle"), with the trailing period of the horizontal synchronization-signal pulse taken as a reference (e.g., referencing the frame buffer region)). The remarks as stated in Claim 3 also apply to the limitations as recited in this Claim.

In Claim 5, the *Sawada* reference discloses the additional feature wherein said "display attribute of said border region comprises a color attribute and an intensity attribute." Regarding the application of an intensity attribute, at Col. 13, Lines 43-45, *Sawada* states that the "display attribute information of the area-attribute information" includes characteristics, such as the contrast and the amount of brightness (i.e., intensity of the display attribute). Next, regarding the color attribute, *Sawada* at Col. 40, Lines 43-45 states that display attributes "such as the RGB level" can also be controlled, wherein RGB level is known to one of ordinary skill of the art to represent color level.

In Claim 9, *Sawada* discloses the display unit as recited in Claim 1 to further include a "background display attribute register (e.g., entire screen) and wherein, by default, said border attribute register (e.g., specific area display attribute) is equal to said background attribute register." More specifically, *Sawada* states at Col. 22, Lines 32-36 that "standard set values (entire screen)" are designated as default values for the controllable items for a specific area. These controllable items include and also relate to the attributes of a specific area of the display (e.g., border attributes as discussed infra.). The *Sawada* reference discloses that when in default, the entire screen area attribute (which also encompasses the background display attributes) is set

to a standard value that is also applied to all other attributes on the screen (including the specific area display attribute) or, in the alternative, the "border attribute" as recited in the Claim.

Claim 10 includes a variation of the recitation of Claims 1 and 2 and therefore the comments made infra. regarding Claims 1and 2 also apply in rejecting this Claim as well.

Regarding Claims 11-17, they recite substantially the same features as claimed in Claims 2-9, respectively and therefore, the remarks stated therein apply to these Claims as well.

With respect to Claim 18, *Sawada* discloses a portable electronic device (Figure 3) comprising:

a processor (Item 101) coupled to a bus (Item 1);

a memory unit (Item 102) coupled to said bus (Item 1);

a user input device (Items 313 or 314) coupled to said bus (Item 1);

and a display unit (Item 323) coupled to said bus and comprising several other elements (all of which) were previously discussed under Claim 1 and those remarks apply to the elements as recited in this Claim as well.

Regarding Claims 19-23, they recite substantially the same features as claimed in Claims 2-6 and 9, respectively and therefore, the remarks stated therein apply to these Claims as well.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Sawada*, et. al.,

U.S. Patent # 6,476,821 (hereinafter, denoted as "*Sawada*") in view of Seung-Hwan *Moon*, U.S.

Patent # 5,825,343 (hereinafter, denoted as "*Moon*").

Regarding Claim 6, the *Sawada* reference discloses most of the limitations as recited in

Claim 6, but fails to fully disclose the additional feature wherein said "display panel is a thin film

transistor liquid crystal display panel." However, the *Moon* reference (Figure 5) discloses a

method and device for driving a thin film transistor liquid crystal display. The use of thin film

transistor (TFT) with liquid crystal displays (LCDs) is widely adopted in the current electronics

markets. When considering what is taught in *Sawada* in view of the teaching found in the *Moon*

reference, it would have been obvious to one skilled in the art at the time of the invention to

combine them because TFT helps to miniaturize the size of an LCD panel, while maintaining the

characteristics of a larger LCD panel. Not only would it have been obvious to the person of

ordinary skill in the art at the time of the invention was made to combine these references, but

also the motivation to combine and/or modify these references is apparent when considering that

LCD's have been widely applied to laptop and palm-sized devices that use LCD technology as applied to their display area.

4.   Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sawada* in view of obviousness.

Regarding Claim 7, the *Sawada* reference discloses most of the limitations as recited (see remarks for Claim 1), but fails to fully disclose the feature wherein the value of "x" is equal to the numerical measurement of two (or twice the size of the original pixel border size). The features in its parent Claim 1 are recited to apply to a pixel border region at a size "x." It follows that it would have been obvious to one skilled in the art at the time of the invention to establish a numerical value for a variable (such as for "x") when determining the size of a region of a display panel is the objective. There is no disclosed criticality of the border being two pixels and it appears that this is simply a matter of routine choice.

As for Claim 8, the *Sawada* reference discloses most of the limitations as recited (see remarks for Claim 1), but fails to fully disclose the feature wherein the "frame buffer region comprises 160 rows and 160 columns of pixels." The features in its parent Claim 1 are recited to apply to a pixel frame buffer region with dimensions "m by n" or (m x n). It follows that it would have been obvious to one skilled in the art at the time of the invention to establish the size of the frame buffer region (as it relates to display panel size) when determining the size of the display panel is the objective as there is simply a choice of a standard display size.
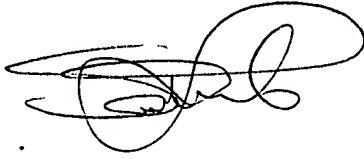
Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Scott L. Luedke whose telephone number is 703/305-8327. The

examiner can normally be reached Monday through Friday from 9:00 am to 5:30 pm

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's

supervisor, Mr. Joseph Mancuso can be reached at 703/305-3885. The fax phone number for the

organization where this application or proceeding is assigned is 703/746-9429.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703/305-4750.

SLL
March 11, 2003